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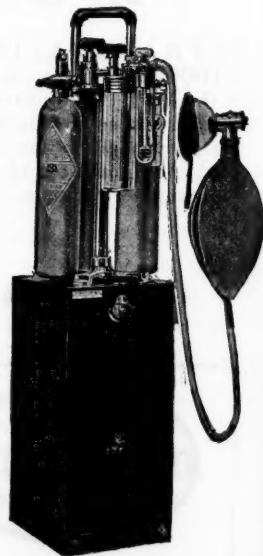
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## ORIGINAL ARTICLES

### ATROPHIC ARTHRITIS.\*

By LORING T. SWAIM, M.D.  
BOSTON, MASS.

A great deal of confusion about arthritis in general is due to the nomenclature. The English speak of chronic rheumatism, rheumatoid arthritis and osteo-arthritis. Goldthwait, Painter and Os-good call them infectious, atrophic and hypertrophic. Nichols and Richardson placed the first two in the proliferative and the last in the degenerative type, referring, primarily, to the soft tissue changes.

This difference in terms is at first confusing but the general opinion seems to be that there are at least two main groups of non-tubercular joint diseases, with the question still unanswered as to whether infectious arthritis or atrophic shall be placed together or separately, making three distinct types.

In speaking tonight I shall use the infectious, atrophic and hypertrophic classification and shall devote myself largely to the atrophic group, which is the most common and most crippling of them all.

Infectious means due to infection. It is a name based on the cause and should not be used in the same classification with atrophic and hypertrophic, which are terms of pathological findings. However, unless we use some pathological terms as periarticular inflammation, we have no way of presenting the picture of the disease other than by the term "infectious."

The (so-called) infectious group has its source, most writers believe, in the alimentary tract; the tonsils, teeth, sinuses, gall bladder or appendix, etc. Our experience has been that the large majority of such cases are intestinal, the source being caecal colitis due to stasis and putrefaction of old material in the colon.

This type occurs at all ages; in children it is called "Still's Disease," with the swollen joints,

enlarged liver and spleen. In later life it is the periarticular arthritis where no bone changes are seen. The symptoms are either those of acute inflammation about a joint and tendons leading to the capsule, or those of low-grade chronic irritation of the tissues bathed by synovial fluid in and about the joints. Many of these recover without assistance and the prognosis is good if the cause of the toxæmia can be eliminated and the general resistance raised by careful building up of the general functional capacity of the patient. I will refer to this more fully later, under "Treatment."

There has been too much importance attached to the tonsils and teeth, with too little study of the gastro-intestinal functions as manifested by distended bowels, gas, foul stools and mucous.

To return to the atrophic arthritis, some feel that it is a metabolic disease resulting in certain bio-chemical alterations causing changes to take place in the bone directly beneath the cartilage, and has no infectious origin.

For several years it has been increasingly demonstrated by the improved X-rays that this atrophic form has been overlooked or misnamed in many cases, while, in reality, it is the most common type.

It seems to be a disease of all ages but is most active frequently in early and middle life, that is, between the ages of twenty and forty. It occurs more often in women than in men, and unless the destructive atrophy of the bone is arrested, produces complete bony ankylosis of the joint. The progress may be surprisingly rapid or correspondingly slow, apparently depending on the general vitality of the patient, and the profoundness of the physiological disturbance.

The pathology begins with joint swelling, is shortly followed by soft tissue proliferation, destruction of the cartilage and removal of bone salts from the whole of the bones, especially the ends, leaving irregular bone surfaces at the joint lines.

A study of X-rays shows a rarefaction of the bone ends which takes place very early and may progress with or without any active inflammatory reaction in the soft tissues.

\*Read before the Providence County Medical Society January 1, 1923.

In considering the etiology of atrophic arthritis, one naturally turns to the problem of focal infection. In some, a focus is found in the teeth, tonsils, sinuses or intestines; in others, in spite of the most painstaking search, no focus can be located. Furthermore, in spite of the removal of a focus of infection, improvement very frequently does not occur. From this it would seem that the disease is a more complicated process than simple infection. It is a metabolic disturbance causing certain definite chemical processes to take place in and around the joints. This reaction causes proliferation of soft parts and atrophy of the bone and cartilage, the nutrition of the bone being so affected that calcium salts are either not laid down or are destroyed and removed. The progress of this gradual eating away of the joint and bone ends is shown in the X-rays only. The shortening of the bone is clinically seen in the stubby loose-jointed fingers with the bulbous, spindle-shaped swelling. There is an apparent enlargement of the joint edges much like those felt in hypertrophic arthritis. However, the X-rays show only a widening of the joint area due to mushrooming of the soft bone ends. Therefore X-rays are necessary in order to arrive at a true diagnosis of the type of the disease and its progress.

It would seem then that hypertrophic and atrophic arthritis are directly the opposite of each other clinically and probably metabolically. Both progress very slowly and are usually afebrile. If these are both due to an infection, it produces diametrically opposite metabolic and chemical reactions.

It is perfectly reasonable, and in fact probable, that any local focus of infection such as the tonsils, will disturb the metabolic balance enough to cause joint symptoms but, from clinical observation, it seems that the focal infection is not the direct cause of the joint changes. If it has any effect, it is as a disturbing agent.

There are recorded spontaneous cures and recovery in the face of infections, which give weight to this belief. A further point in favor of metabolic, rather than infectious origin, lies in the failure to find bacteria in these joints. This metabolic disturbance is not as yet understood, the chemistry has not been worked out sufficiently to warrant any scientific statement of facts. We are, therefore, thrown back upon clinical observations.

In studying the atrophic arthritis, the following clinical observations have been found so often that it seems justifiable to draw your attention to them.

In carefully taken histories, one almost invariably finds long continued physical or nervous strain of some kind has preceded the onset of joint symptoms. Continued worry, disappointment, home difficulties and grief, all disturb the physiological balance, particularly of the internal glandular system, and cause digestive disturbances, as shown by Cannon.

The earliest symptom frequently complained of is a "numbness" of the fingers. By this the patient means an actual blanching, which extends over the ends of one or several fingers. The fingers are cold to touch, pale, without the normal response of the blood supply to pressure. The nail even is white. This phenomena of the blood supply occurs irregularly; at any time in the day, is not associated with cold, but may occur in mid-summer, during exercise, or at night in bed. After varying periods it is relieved by heat or massage or may as suddenly disappear of itself.

This vaso-motor disturbance occurs during times of nervous tension, in most of the cases observed, and is usually absent after the process of atrophy is well started; consequently, unless asked for, it is often overlooked by the patient.

It is unmistakably a local vaso-motor disturbance, which, it does not seem far-fetched to infer, may affect the nutrition of the joints if repeated frequently enough. It is interesting to note that the finger affected is quite commonly stiff during the vaso-motor spasm.

The clinical results of a repeated anaemia of this kind is not known, but that the same atrophic changes have been observed in the bones in arteriosclerosis, has been proved by X-rays, showing the calcified artery and the patches of bone atrophy. The inference is strongly in favor of poor nutrition to the joint resulting in atrophy because the extremities are more frequently affected than the large joints which have better circulation.

Atrophic arthritis is most frequently found in a certain build of patient, the slender bodied, light boned, willowy type, or those approximately this build, as opposed to the heavy, massive boned type, who show more of the hypertrophic changes. This type is nervous, high strung, is apt to worry and has a sensitive internal glandular system. They



are subject to rapid vasomotor changes and are also subject to cold hands and feet, and are functionally unstable.

With a few exceptions, these cases have low systolic blood pressures, 105 to 120, with a low pulse pressure ranging from 15 to 30. The hypertrophic cases have a higher blood pressure.

This low pressure is associated with a sub-normal temperature.

Both these observations suggest lowered vitality. They are easily fatigued.

It has been observed that, as the blood pressure and temperature regained normal limits, the vasomotor phenomena decreased and the bone changes in several cases apparently were arrested. The internal balance was restored.

Another clinical observation has seemed of significance, that is the acid tongue. It has been found that the cases of atrophic arthritis had clean, shiny, wet tongues, which gave an acid reaction to litmus paper. It was also observed that, as the acidity of the tongue decreased, the swelling of the joints decreased. What this acid mouth means is not known. The saliva should be alkaline. Dr. Walter Miner has verified this in a large series of dental cases reporting that they are, with only a few exceptions, alkaline.

The slender people have this tendency to acidity more frequently than the heavy group. It may mean nothing, and it may mean a general acidity of the mucous membrane secretions. It has raised a question of a general low grade acidosis not demonstrable by blood tests as yet.

In reference to this, two cases were found to have acetone in the urine during exacerbations of the arthritis.

The acid mouth is not the result of decayed food, unclean teeth or pyorrhea, as it is found in exceptionally well cared for mouths. It is not associated with meals. It is interesting to note that soda bicarbonate decreases the joint pain and the acid tongue, if given in sufficient dosage.

In atrophic arthritis one frequently finds general atrophic changes in the skin, hair, finger-nails and muscles. The gums are spongy and the teeth decay easily. The mouth resembles that of a scurvy patient. These cases are very soft muscled and thin-skinned. The skin is dry and does not perspire and, as Dr. Wilde of Bath, England, has shown, the sweat of these patients is always acid

and remains so even after many days of induced sweating. He believes the chronic rheumatism and atrophic cases are a low-grade acidosis, due to the failure of the normal function of the skin in eliminating lactic acid, the loss of the lime salts being due to their need as neutralizers of this accumulated acid. Phosphate of lime has a great affinity for lactic acid.

He has devised a method of low temperature, moist steam sweats, never over 105°, which can be carried on daily for 60 days or more without fatigue or depletion. Last summer he demonstrated his results to me. They were very convincing.

So far, clearly, it would seem as if we were dealing with a disease which profoundly affected the whole body, as is not seen in either the infectious periarticular or the hypertrophic type.

Very little has been said about hypertrophic arthritis because you are all familiar with the X-ray findings of proliferation in spurs, following the capsular or tendinous attachments about joints. It chiefly is found in the heavy-boned types of people at points of strain and usually gives no symptoms other than those due to mechanical interference, to pressure soreness and irritation. Extensive spurs may be found without any symptoms at all.

Atrophic arthritis suggests a bio-chemical disturbance, whether due to one of three causes or all, we do not as yet know. First, insufficient diet, as suggested by the work of Dr. Percy Howe, on the effect of deficiency diets on the teeth and jaws of guinea pigs and monkeys, or, second, to the excessive accumulation of acid in the lymph spaces, which uses up the mineral salts necessary to bones and muscles: or, third, due to some failure of the body to use these mineral salts through a malfunctioning of the gastro-intestinal tract or the glandular system. As yet, we do not know, all three may be present in any case. My belief is that atrophic arthritis is a metabolic disturbance of this kind and will be explained when we know more of the internal glandular secretions and the chemistry of sweat. Research along these lines is being carried out.

If this is so, then it behooves us to differentiate the types of arthritis in any reports we may publish. It is clear that all data loses much of its value when no attempt is made to classify the

types with the laboratory, pathological, clinical observations and treatment. It is to be regretted that X-ray diagnosis is not usually used in all cases, as it is the only way we have of making a diagnosis of the bone changes present. It is disappointing that much of the careful laboratory work has not been done with the cases classified in types. It would, undoubtedly, be much more valuable.

Again, treatment depends upon the type of disease. The toxic case is elimination, that is, removal of the focus of infection, clearing the intestines, prevention of toxæmia through diet. Correction of bowel drainage, etc. The atrophic case needs building up. First and foremost, better physiology. This, in our experience, depends upon body mechanics; correct use of the chest, diaphragm, and space for the abdominal organs to work normally in. All this is accomplished through corrective posture work, rest positions and exercise.

Better chemistry is secured through care in selection of the base-forming mineral salt foods, such as fruits, green, fresh vegetables, whole grains, milk and eggs, avoiding acid-forming foods, such as excessive meat, white flour, sugars and degerminated grains. But foremost I place the correct body mechanics to prepare the body to handle the foods. The better elimination and neutralization of acid can be hastened, not only by base-forming foods, but by alkalines and, lastly, by Dr. Wilde's method of skin elimination, which increases the metabolism of every cell in the body. Depletion by dieting, over-exercise and elimination is dangerous in these cases. They should be aided to build up in every way, by frequent rests, carefully directed body exercise, sun, fresh air, food, and freedom from worry and care. They are long, hard cases, but, with proper supervision, they can be helped and restored to some degree of usefulness, although regeneration of the damaged bones cannot be hoped for in our present state of inexact knowledge. However, the disease can be arrested and has been in many cases.

#### DISCUSSION.

Dr. Danforth:

I think we are very indebted to Dr. Swaim for talking on such a subject, a subject in which we are all very much interested because we all see

these cases and worry about them; they don't get better and they wander from one doctor to another. I think that the points which Dr. Swaim has brought out and the points which have been of great help to me have been that in the last two years I have learned a little about dividing the types. I know there was a great feeling that tonsils and teeth were responsible for various conditions and played a very important part, and every once in a while some focal infection cleared and the patient got better. Very many times the foci cleared up without any effect upon the joint disturbance.

Aside from learning very gradually and very poorly a little about separating the different types of arthritis, there is one other thing that has helped me. That was the attempt to get the body of the patient into good condition so that the patient might be nearly normal by improving in every possible way his nutrition, as in a great many instances patients were not too well nourished. I feel that this has helped me more than any other thing, in treating some of these very special conditions.

I hoped that Dr. Swaim might say what he felt about the use of gland substances in the treatment of some of these cases. Would it seem to be of help in restoring their normal physiology?

Also, I wish to say a little about what help, if any, blood chemistry is in trying to learn something about these conditions—what help it is in a practical way in treating these conditions. I have been having more or less chemistry of the blood studied in the hospital, and many times find that they are not far from normal. Is there anything which may show any light on this?

Dr. Mathews:

I know you have profited by this talk by Dr. Swaim. I had the pleasure of hearing him some three or four weeks ago at the Massachusetts General Hospital, before a small number of medical men. That, to me, was as eye-opening as anything I have ever heard. I had not heard much of Dr. Wilde, but the work that Dr. Swaim saw and which he dilated on was to me a matter of tremendous interest.

The medical man sees probably more arthritis cases than most any other line of work; not only because the cases are numerous but because they come so often and go away apparently no better.

Some of these cases develop into chronic and bone changes occur. With it all, so far there has not been much new information, and Dr. Wilde's ideas will be a great help.

In the past, I remember, in my early practice, we used salicylates, etc. Apropos of this, I thought you might be interested in hearing how it is said that salicylates originated. It seems that there was a very strong feeling, more in England, to the effect that "what the Lord gave, the Lord would take away," providing a remedy for the illness; for instance, if the Lord had given malaria, He had also given the tree from which quinine is obtained. For patients suffering from rheumatism which God had sent, He had also provided a remedy. He looked about; finally there was a tree called the willow (or willow tree). From that he got his salicylates, and that is how salicylates originated.

I will not try to cross-examine Dr. Swaim, but I would like to ask a few questions. In the first place, regarding the rheumatic fever, whether that is occasionally the rheumatoid infection? I would like to ask, also, whether basal metabolism is low in most cases. Whether there is a high blood sugar in these cases or whether this has any effect? Also, what faith, if any, Dr. Swaim has in physiotherapy in the treatment of these very obstinate cases?

Dr. Hammond:

I think you must all have been impressed that you have listened to a very clear exposition of the modern ideas on arthritis and a very sane manner of treatment by Dr. Swaim. Personally, I want to thank him especially for confirming some ideas which I have. I think the most prominent one of those would be the subject of focal infection. There has been so much damage done to these people with crippled joints by the wholesale removal of tonsils and teeth that it is time that more than one voice were raised in protest. Dr. Swaim spoke of setting his interest largely in the atrophic type and described clearly that type of arthritis. I have been impressed in treating those people as to what delicate creatures they are. They don't stand very much and they should not be submitted to much in the way of operation or vigorous treatment.

In the Nose and Throat Service at Johns Hopkins several years ago, the surgeons there found

that the removal of tonsils in the atrophic type was a major operation and, furthermore, they found that those people did very badly under operation.

The work of the Englishman who finds that low temperature produces better results than high bears out the idea that these people should be treated carefully. These people think the stronger the medicine that you take, the better. I believe that I hardly ever tell a person to put his foot in hot water "as hot as you can bear it."

I think Dr. Swaim's ideas of diet are very sound. Many patients come in under-nourished, and meat is their first requisite in building up, and it is always the type which needs to be fed up which has been starved previously.

I have found that to deprive patients of sugar that they suffered from the lack of it and the minute they were put back on the sugar they immediately came up again.

I believe that our greatest hope in the treatment of these conditions lies in physiotherapy largely applied. Too often patients go to sanitariums or baths for a limited period of time, receive vigorous treatment and come home exhausted. Bathing or electricity—whatever method you choose—but those methods must be employed with the needs and requirements of each individual patient in mind, and I believe that more harm is done usually by too vigorous treatment than by the opposite.

Again I thank Dr. Swaim for his very interesting paper.

#### THE SCHICK TEST AND TOXIN ANTITOXIN IMMUNIZATION.\*

By HILLARY J. CONNOR.

PROVIDENCE, R. I.

Toxin antitoxin immunization has been carried on about nine years. Von Behring, with the assistance of Theobald Smith, in 1912 perfected a method of immunization which was given to the medical profession in 1913.

Beginning in 1916, an extensive campaign has been carried on in the schools of New York City under the direction of William M. Park, who has given us most of our information concerning this treatment.

\*Read before the Providence Medical Association, Dec. 4, 1922.

At about the same time as discovery of toxin antitoxin immunity in human beings, Von Schick in 1913 gave a test to the medical profession which gave definite evidence whether a person was immune or non-immune to diphtheria.

This test is done as follows:

In right forearm unheated diphtheria toxin is injected intracutaneously, while in left forearm toxin which has been heated to 75° C. for ten minutes is injected in a similar manner. This heating destroys the soluble toxin, but affects very slightly the protein of the diphtheria bacillus.

Thus we have the toxin alone injected in right arm, while the protein contents in equal amounts is injected in both arms.

The test is read as follows:

Positive, a well pronounced red area on right forearm, with nothing on left.

Negative, no red area on either arm.

Pseudo-negative, a brownish or reddish area equal in size on both arms, indicating a protein reaction.

Positive combined, a reddish or brownish area larger in size on right arm than left, indicating both a toxin and protein reaction.

The test is read with most certainty four days after injection.

The positive and positive combined reactions call for treatment with the immunizing mixture.

The negative and pseudo negative reactions indicate the individual has a natural immunity to diphtheria.

The necessity for control injection is shown by the fact that twenty-five to thirty per cent of the children tested in New York schools gave a negative pseudo reaction. Without the control test these would have been called positive.

These tests are read with greater accuracy as the physician grows more familiar with seeing them. The City Health Department would be glad to have any doctors interested attend some of the clinics and observe the work done.

At the present time there are several different laboratories putting the Schick test on the market. Not all of these are reliable. The outfit supplied by the New York City Department of Health is probably more reliable than most. This outfit consists of a glass capillary tube containing one and one-half M. L. dose of diphtheria toxin, a small rubber bulb for expelling toxin and a bottle con-

taining 10 C. C. of saline. The dose is 3 minims of the solution or about 1/40 M. L. dose of diphtheria toxin. The outfit contains about 45 doses.

The five or ten test outfits supplied by some of the companies are probably unreliable, as diphtheria toxin is a very potent solution and the amount measured into capillary tubes for five tests would be very difficult to measure with accuracy.

Toxin antitoxin mixture: The dosage is 1 C. C. administered weekly for three injections. Each C. C. consists of 3 L. doses of toxin and 3½ units of antitoxin.

A L. dose of toxin is the smallest amount which will kill a guinea pig within four days. A unit of antitoxin is the amount of antitoxin which will protect a guinea pig, average size, against 100 times the fatal dose of toxin.

The standard of safety is maintained when 5 C. C. of this mixture, that is, five times the dose used in our treatment injected into a guinea pig, produces pronounced local induration with late paralysis, but not acute death.

All children from six months to six years of age should be given treatment, as nearly all children at this age are susceptible to diphtheria, as shown by the Schick test. Infants under six months of age usually inherit a maternal antitoxic immunity from the mother so they do not require treatment.

Children over five years of age are first tested for immunity, then if necessary are given toxin antitoxin injections.

The younger children, under five years, suffer very little inconvenience from injections, but the older ones often have red, swollen arms and occasionally temperature of from 100 to 103°. There are no after effects, however, the swelling usually disappearing in three or four days.

This is probably a protein reaction, as children having a positive combined Schick test are more apt to have swollen arms following toxin antitoxin injections than those with simple positive Schick. Also children under five years seldom give a protein reaction to Schick test. Reactions are largely due to the protein contents of the culture fluid and are not due to toxin as much. This is evident because the same reaction follows the injection of the control test where the toxin has been destroyed by heat.

The results of toxin antitoxin immunization



vary considerably among different classes of children but on an average about 80 per cent become immune after the three injections.

It has been found that the higher the per cent of positive Schicks in a school, the poorer, as a rule, is the response to the toxin antitoxin mixture; and the lower the percent of positive Schicks the better the response to the toxin antitoxin mixture. In institutions where children are crowded together they have been found as low as 5 to 10 per cent positive, and 85 to 100 per cent of these respond to treatment.

This is explained by the fact that tissue cells of the positive reaction have been partly stimulated by exposure to diphtheria, as a result the large majority promptly become immune after injections of toxin antitoxin.

Children in the poorer neighborhoods, where they live crowded together, give much higher percentage of negative Schicks than the more well-to-do children. This can be explained by the fact that living close together they are repeatedly exposed to diphtheria and getting it in small doses not enough to produce sickness, gradually acquire an immunity. Also many develop an acute attack of diphtheria and others may be diphtheria carriers for a shorter or longer interval.

Some of our work done here in Providence illustrates this very clearly. The toxin antitoxin mixture requires from one to six months to produce immunity. Schick tests should be done six months after immunization and if still positive, second series of three injections given. Statistics show over ninety per cent of those immunized are immune for seven years and probably for life.

#### ANAPHYLAXIS.

There are no cases on record of anaphylaxis out of several hundred thousand injections given. Rarely an urticarial rash occurs. I have seen one case of this kind which followed both the Schick and toxin antitoxin injection.

The amount of antitoxin given in each dose of toxin antitoxin, less than one drop, is so small that there is no danger, even in sensitive individuals.

A preliminary dose of antitoxin is no contra-indication to giving toxin antitoxin, nor is there any danger in giving antitoxin following injections of toxin antitoxin.

As this mixture requires from one to six months to immunize the patient, it should not be given during an attack of diphtheria. Diphtheria antitoxin should be given instead.

The following is a short sketch of our work done here in Providence: About one year ago we opened a clinic at the Atwells Avenue School-house. Our chief aim was to immunize the younger children under school age. Several months later we opened clinics at the North End Dispensary, Point Street, and Esek Hopkins Schools. The attendance at first was very gratifying, but gradually fell off so that we felt impelled to close those clinics and are now concentrating on the school children, going from school to school.

We realize as the mortality from diphtheria is greater under five years of age, or before school age, it is of more importance to treat these children than the school children, but it is much more difficult to get hold of them.

Recently the teachers have been announcing to the children that we would be glad to have their mothers bring younger brothers and sisters for treatment and the response appears to be getting better every clinic.

We have not yet started re-Schicking the children already injected, so that I cannot give any data showing result of treatment.

I thought, however, it would be interesting to tabulate the results of the Schick tests in the different schools, and different sections of the city, showing the variations among different classes of children.

The following table shows the number of positive and negative Schicks among 1,952 children tested:

First: Six schools on Federal Hill.

<i>Positive, or Susceptible to Diphtheria.</i>	<i>Negative or Immune to Diphtheria.</i>
America St. .... 14	America St. .... 46
Arthur Ave. ....135	Arthur Ave. ....313
Courtland St. .... 36	Courtland St. .... 66
Atwells Ave. .... 78	Atwells Ave. ....157
Knight St. .... 52	Knight St. .... 88
Africa St. .... 18	Africa St. .... 34
Total .....333	Total .....704

About thirty-two per cent positive, most of these children were not over twelve years of age, and of Italian parentage.

Second: Three schools in Charles and Branch Avenue district.

<i>Positive.</i>		<i>Negative.</i>	
Old Branch Ave... 29		Old Branch Ave... 66	
New Branch Ave... 43		New Branch Ave... 102	
Esek Hopkins.... 52		Esek Hopkins.... 186	
Total .....124		Total .....352	

These children also are mostly of Italian parentage. In Old Branch and New Branch Avenue, the children not over twelve years of age equal 30 per cent positive. At Esek Hopkins, with children up to seventeen years of age, 21 per cent were positive.

The percentage of positive at all these schools average quite close with the exception of Esek Hopkins, which is considerably less. This is to be expected, as percentage of positives should be lower among older children.

Third: Point Street School; 142 positive, 153 negative; 48 per cent positive.

This fairly high percentage in spite of older children, ages comparing with those at Esek Hopkins School. No predominating nationality.

Fourth: North End Dispensary; 20 positive, 49 negative; 29 per cent positive. Mostly Jewish children at this clinic.

Fifth: Althea Street School; 48 positive, 27 negative; 64 per cent positive.

This school had the highest percentage of positives and illustrates the effect living conditions have on the amount of susceptibility to diphtheria.

Comparing these children with those at Federal Hill, ages being about equal, percentage of positives here 64, is twice as high as percentage there of 32.

On an average, children at Federal Hill live under crowded conditions and are more likely to become immune from contact with other children. At Althea Street, on an average, the children live in better homes, more scattered, and are therefore more susceptible to diphtheria.

One more table will illustrate the degree of susceptibility at different ages. As one would expect, the younger the child the more susceptible to diphtheria.

Age.	Positive.	Negative.	Per Cent Positive.
6 .....	99	107	.43
7 .....	99	156	.38
8 .....	93	181	.33
9 .....	92	178	.33
10 .....	102	211	.32
11 .....	76	155	.32
12 .....	57	139	.29
13 .....	49	81	.37
14 .....	8	63	.11
15 .....	3	14	.17

This table shows a fairly consistent drop in percentage of positive cases as the age increases.

These figures were taken from a total of 1,952 Schick tests.

## THE JOURNAL'S CALIFORNIA TRIP TO THE A.M.A. CONVENTION

(continued)

W. E. Musgrave, Chairman of the Committee of Arrangements, presents the following selective itinerary:

### TRIP No. 1, TWENTY-ONE DAYS TO HAWAII AND RETURN.

This trip includes a visit of six days in Honolulu with sight-seeing trips to all parts of the city and on the Island of Oahu and two days in Hilo and the Kilauea National Park, with a visit by day and night to the famous active volcano of Kilauea National Park. This is the easiest volcano to visit in the world and it alone is worth the trip to the islands. This is the most beautiful time to visit Hawaii, as the flowering trees and shrubs are all in bloom, vying with each other in their profusion of bloom and riot of color. The cool trade winds continually fan your cheek and the nights are soft and balmy, while the water of the ocean ever invites you to revel in its warm embrace.

### TRIP No. 2, TWENTY-FOUR DAY CRUISE TO ALASKA.

Leaving San Francisco by boat or train for Seattle, where a day is spent in sightseeing, proceed from Seattle by boat through the inside passage (one of the most beautiful water trips in the world), calling at Ketchikan, Wrangell, Peters-

(Continued on page 62)

# THE RHODE ISLAND MEDICAL JOURNAL

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## RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

FRANK E. PECKHAM	<i>President</i>	Providence
ARTHUR T. JONES	<i>1st Vice-President</i>	Providence
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### DISTRICT SOCIETIES

#### KENT

Meets the second Thursday in each month

G. HOUSTON	<i>President</i>	Arctic
C. S. CHRISTIE	<i>Secretary</i>	Riverpoint

#### NEWPORT

Meets the third Thursday in each month

NORMAN M. MACLEOD	<i>President</i>	Newport
ALEXANDER C. SANFORD	<i>Secretary</i>	Newport

**Section on Medicine**—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

**R. I. Ophthalmological and Otological Society**—2d Thursday—October, December, February, April and Annual at call of President Dr. H. E. Blanchard, President; Dr. Jeffrey J. Walsh, Secretary-Treasurer.

**The R. I. Medico-Legal Society**—Last Thursday—January, April, June and October. James B. Littlefield, Esq., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

#### PAWTUCKET

Meets the third Thursday in each month excepting

STANLEY SPRAGUE	<i>President</i>	Pawtucket
GEORGE E. RONNE	<i>Secretary</i>	Pawtucket

#### PROVIDENCE

Meets the first Monday in each month excepting

WILLIAM B. CUTTS	<i>President</i>	Providence
P. F. CHASE	<i>Secretary</i>	Providence

#### WASHINGTON

Meets the second Thursday in January, April,

JOHN E. RUISE	<i>President</i>	Ashaway
WM. A. HILLARD	<i>Secretary</i>	Westerly

#### WOONSOCKET

Meets the second Thursday in each month excepting

A. A. WEEDEN	<i>President</i>	Woonsocket
THOMAS S. FLYNN	<i>Secretary</i>	Woonsocket

## EDITORIALS

### WHAT IS THE PRACTICE OF MEDICINE?

One cannot but be impressed by the ever increasing list of medical cults, whose bold claims of almost miraculous cures would seem to demand recognition.

To average citizens, including State legislators, must come the thought that the prerequisite standard of education and training of medical practitioners is either reasonably high or unnecessarily high. It is inconceivable that any sane person would argue that the required standard is too high.

From time immemorial, the medical profession has earnestly striven to extend its knowledge and to improve its armamentarium in order to relieve human ills. Wonderful progress has been made, especially during the last fifty years, so that now, persons afflicted with disease receive more skillful treatment than ever before. In spite of this, however, medical parasites seasonally appear and, by clever, even though false and ridiculous, advertising, they impress the laity, most of whom have no way of appraising either the value or the worthlessness of these claims. The perpetrators of these so-called systems of treatment have practically no

knowledge of human anatomy, physiology, pathology, etc., and yet they blatantly deny the existence of fundamental and well established facts. It is not surprising that the laity accept as true these bogus claims, because no refutation of them has been forthcoming from medical sources.

Psychologists tell us that, stored away in our subconscious minds, is the overpowering desire for health and happiness. This state of mind explains the cause of the great impression made by the alluring promises of all medical charlatans.

It is time for the medical profession to abandon its hoary attitude of silent dignity and come forth to do its full duty in preserving the health of the community by properly informing the public on matters pertaining to health. Several methods of procedure might be suggested, but the free public lecture at intervals, properly advertised and conducted under the auspices of the State medical society, would, we are certain, make a strong appeal. In this way a fair and just presentation of medical facts and theories could be made and the absurdity of the claims of medical parasites could be shown.

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#### HYGEIA.

The first issue of *Hygeia* will appear in April. While this new journal, its purpose and scope, is known to all the readers of the *American Medical Journal*, it is certainly important that all local medical associations sustain the National Association in making of this journal a success.

The American Medical Association has not for a long time, if it ever did, undertake anything of as much potential value to the country as the publication of a popular medical magazine. Some worthy efforts to enlighten the public truthfully of what is known about disease, methods of prevention and treatment, has been undertaken by a few newspapers and magazines, public health bulletins of the United States Public Health Service, various city and State health departments and other official and non-official associations of good standing. On the other hand, these efforts have been feeble, compared with the money and energy expended on propaganda put out by commercial houses which deal in medical supplies. To say

nothing of printed advertisements, these houses detail men who spend all their time trying to persuade physicians and druggists that this, that, or the other remedy is the greatest thing in the world. The patent medicine of former days still flourishes as it never flourished before, and even so-called legitimate houses are expanding their business by inventing new chemicals and new names, even to deceive the physician. But this is not all. New kinds of healers, Coue, Dr. Palmer's cult and a host of others are constantly before the public, showing their wares so that even those in the remotest hamlets know of them and their pretensions.

And lastly, within a few years there has sprung up about the modern health movement also a host of men and women who have by education or experience obtained a smattering of knowledge of the details of the methods of the prevention of disease, and who are posing as health experts and advising measures of doubtful value or even fraudulent character sometimes for their own private gain. Most people who have come from country homes remember that almost all of them possessed "a doctor's book" usually written by some man to sell and with little thought as to its accuracy. It is not easy to get a physician in the country and unfortunately the ability of country practitioners is made below the best in cities and such a book filled a certain need. This journal, *Hygeia*, will enlighten country people on the real status of treatment and prevention of disease, taking to a large extent the place of the popular medical books, and force the country practitioners to render a better grade of service.

This new journal, if it does all that it is intended to do, will aim to tell the truth about health matters just so far as they are actually known. There is no ulterior motive in its publication. It proposes to tell scientific truths about disease in simple and understandable language.

This magazine should go into every home and it is hoped and believed that it will counteract false propaganda which has for its object the extraction of every dollar possible from the public regardless of what it gives in return. As physicians, we ought to subscribe to it, at least temporarily, and if it proves to be what is hoped, we should urge its introduction into the home wherever we can.



## LAY MEDICINE.

Every faith, cult, system of thought, institution of learning or systematized organization wanes in the success of its activities and undergoes retrograde changes unless protected from those influences which make for lessened efficiency and intrinsic worth. Organized religion finds it necessary to adopt measures varying with the needs of the time to preserve the purity of its doctrines and prevent their overthrow or obliteration by the inroads of heresy and schism. The dominant thoughts of national character and politics, unless kept fresh by frequent review and the recollection of salient factors and lessons learned by history soon change and are perverted into the means of anarchy with resulting harm to peoples and the lowering of the social level of posterity. So also does the torch of true learning become uncertain in its light as a guiding beacon, its bright, clear flame, smoky and dim, will no longer be accepted by peoples as their star of hope in matters medical and hygienic, if it is no longer fed with the fuel of sound, sensible and sane thought and the hand that holds it strong, firm and unshaking.

The torch of scientific medicine, thanks to the combined efforts of many, if not all branches of science, has risen from a murky fog of secrecy, doubt, nostrums and uncertainty and made clear the way for the solution of medical problems which with ever increasing knowledge have multiplied many fold until our information on many medical subjects is quite complete and satisfying. Until within a very few years it has seemed that the medical profession was not only the custodian of knowledge of matters medical but also the means of putting into practice the means of prevention and cure of disease. It was furthermore closely associated with allied subjects, all of which insured its position as a competent adviser of individuals and peoples, and made it as great as any of the learned professions. That a change in its status, a curtailing of its functions and a lessening of its usefulness as a leader of sound, scientific thought has taken place is evident to anyone. By lay medicine we mean the practice by individuals, of the doctrines of the many various cults of thought and doctrine. The chiropractor, passing his hands over the lumbar region of a person weighing 250 pounds, detects a dislocated vertebra; the Christian Scientist, by denying the existence of

disease, by showing that Mind is supreme (Science and Health, 375, 21), cures paralysis by destroying the patient's belief that he has paralysis; the religious curist, affectionately laying his hands upon the sufferer's head and uttering a very short prayer, sends the patient away with the hope not only that he will feel better but that he will be better—but he will not, because degenerative changes have destroyed organs that no power whatever can restore. Misses who have read metaphysical magazines occasionally for a few months say to seasoned scientists, "Oh, but then, you couldn't understand." Clergy, who should be preparing their next Sunday's sermon, "treat" persons of whose ailments they know nothing and by repeating oft and many times an absolute falsehood in their particular case, people try to humor themselves into the belief that they really feel better when they don't.

The ardent Christian Scientist writes a letter to my patient, urging him to give up my treatment or personally calls upon him and urges that the same is sure to harm him, he ascends the rostrum and to a crowded hall announces the teachings that disease is the result of mortal mind only. The chiropractor hires the entire page of a newspaper and there toots his blatant trumpet, and the lady "psychologist" prescribes salt and water along with mental rubbish that is far more harmful than a hypertonic saline. Another practitioner advises the patient with a small mammary tumor to "pay no attention to it," and, to our shame, we have sat at meat with such.

"My boy, you haven't consumption. Go to school, come to Sunday School, go and play with the other boys," and, we may add, infect all of them that you can.

And in all these things there is the element of the marvellous, the mysterious, the unusual, the mystifying and the supernatural, all increasing the reputation of the particular person who is manipulating the "cure." When the metaphysician effects a cure it is soon all over town and his name is great among the Gentiles, whereas when a person improves under medical treatment nothing is said nor is it considered at all remarkable.

The question of personal veracity is one which enters very largely into the active propaganda of these extra medical cults. Persons claim to be improved who are not; they claim to be cured

when the same lesions with consequent symptoms persist; they claim to have had gross lesions which to the knowledge of competent scientists they never had and of which they could not have been cured.

Now it is a very easy thing to dispose of the accumulated evidence of science with a word—qualms and fears with a wave of the hand or a prayer; but it is not as easy to take a Wasserman, make an X-ray study of the gastro intestinal tract, make a basal metabolism study, take a culture of the throat, or remove an abdominal tumor.

Nor is our profession entirely blameless of the charge of purveying to the public clean, wholesome, scientific truth as the same comes to us from study, consideration and experience. Some of the utterances and writings of the present day are absolutely unfit for lay circulation and suggest obscene smut that place the late Balzac, Maupassant and Boccaccio in the infant class. The subconscious mind is loaded with intellectual activities and adherent scybalae which no psychoanalytical catharsis can ever remove and the post-hypnotic state of negative hallucination sublimates an aromatic compound which makes the benzene ring look like a buzz saw. We wonder that the clear flame of the torch of learning does not go out entirely, so deprived of life-giving oxygen is this pseudo-scientific atmosphere.

But it is not necessary to multiply examples of the operation of non-scientific cults or even to name them—rather it is to our advantage to consider why they have become so widespread, untruths so generally accepted by so many, and to devise means for righting popular thought and an adequate understanding of disease as it exists, its prevention and treatment. The former is due to publicity and its partner propaganda, the latter to lack of the same. The apostles of the former announce their doctrines, their fictitious cures from the lecture platform, the pulpit, by radio, by large-lettered press, by tracts or leaflets, by word of mouth—and all in no uncertain tones.

And what is to be done about it? What form of educational propaganda may be instituted to stem this tremendous tide of untrue and absurd thought which lowers the plane of popular intelligence, and causes tremendous economic loss from preventable disease and death? Let us ask ourselves the question, Do medical men seize every

opportunity to correctly inform the public as to the truth whenever it offers and by a few well chosen words direct its thoughts along the right channels? Is there enough "person to person" work by scientists? Are there any or enough "free public lectures" on preventative medicine or any educational campaign in the public schools to train the growing mind in right thinking in medical matters and in hygiene and is there any movement on foot under the direction of the medical profession to directly oppose the active energies of these cults and to correct the untrue and absurd? We wot not.

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#### APRIL FIFTEENTH.

This is the final date upon which prospective excursionists to the A. M. A. meeting in San Francisco will be able to arrange their trip at the reduced rate offered by the RHODE ISLAND MEDICAL JOURNAL.

Independent of scenic wonders and geographic entertainment *en route* to California, W. E. Musgrave, the Chairman of the Association's Entertainment Committee, has arranged a series of additional trips (which appear in another column) which are well worth the consideration of those who may find it convenient to prolong their stay somewhat beyond the time of the actual convention.

This travel opportunity has never before been offered to the physicians of Rhode Island, and it is altogether conjectural if it ever occurs again.

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#### THE JOURNAL'S CALIFORNIA TRIP

(Concluded from Page 58)

burg, Taku Glacier and Juneau, till you arrive at Skagway, where you disembark for a railroad trip to Bennett Station and return to catch the boat for Sitka, the quaintest and most interesting city in Alaska. Leaving Sitka, travel for six days through the inside passage till you arrive at Seattle, where four days will be spent in a side trip to the beautiful Rainier National Park. Returning to Seattle, you embark by train or rail for San Francisco or points east. There are indications that this will be a very big Alaska year, so early reservations should be made for this trip.

## SOCIETIES

### QUARTERLY MEETING RHODE ISLAND MEDICAL SOCIETY.

The regular quarterly meeting was held in the Medical Library, March 1st, 1923, at 4 P. M., the President, Dr. Frank E. Peckham, in the chair.

The minutes of the December meeting of the Society were read by the Secretary.

The Secretary read a letter from Mrs. Imogene M. Carr, widow of Dr. George Wheaton Carr, for many years a fellow of this Society, presenting "to the Rhode Island Medical Society the life-size portrait of Dr. Carr, now in the possession of the Society, as a permanent memorial to his memory." On motion of Dr. George Crooker, seconded by Dr. Wm. R. White, it was voted that the Society accept with thanks Mrs. Carr's generous gift and that the Society communicate to the donor the Society's action.

The President announced the appointment of Dr. W. Louis Chapman, Providence, as Anniversary Chairman.

The following program was presented:

1. "Principles Underlying Weaning from the Breast," Dr. Harold G. Calder, Providence.

2. "Some Problems in Artificial Feeding," Dr. Henry E. Utter, Providence.

3. "Feeding in the Treatment of Diarrhoea," Dr. Wm. P. Buffum, Jr., Providence.

Discussion of the three papers was opened by Dr. Robert M. Lord, Providence.

A communication from the Women's Joint Legislative Committee of Rhode Island asking the Society's action in the House bill 756, known as the injunction and abatement bill to abate houses of ill repute and prostitution. Referred to Legislation Committee.

J. W. LEECH, M.D., *Secretary*

### PROVIDENCE MEDICAL ASSOCIATION.

The annual meeting of the Providence Medical Association was called to order by President N. Darrell Harvey at 9:05 P. M., January 1, 1923. The records of the last meeting were read and approved.

The reports of the Secretary, Treasurer, Standing Committee and Reading-Room Committee were read, accepted and ordered placed on file.

The President's annual address by Dr. Harvey

dealt with the presentation of papers by local members of the profession, the improvement in our collations, the importance of the district society councillors, the increased success of and high plane upon which our medical journal is conducted, and urged a campaign for more members.

In accordance with Article 1, Section 6, of the By-Laws, the Standing Committee placed the following nominations for officers and committees for the year 1923:

For President, William B. Cutts, M.D. For Vice-President, George W. Van Benschoten, M.D. For Secretary, Peter Pineo Chase, M.D. For Treasurer, Charles T. Deacon, M.D.

For Member of the Standing Committee for five years, N. Darrell Harvey, M.D. For Trustee of Rhode Island Medical Library for one year, P. Williams, M.D. For Reading-Room Committee, George S. Mathews, M.D., Elihu Wing, M.D., Herman C. Pitts, M.D.

For Delegates to the House of Delegates of the Rhode Island Medical Society: C. A. McDonald, M.D., J. P. Cooney, M.D., G. A. Matteson, M.D., J. E. Donley, M.D., J. B. Ferguson, M.D., Herbert E. Harris, M.D., Bertram H. Buxton, M.D., Peter P. Chase, M.D., Ira H. Noyes, M.D., Prescott T. Hill, M.D., William P. Buffum, Jr., M.D., George R. Bardon, M.D., H. G. Partridge, M.D., Arthur H. Ruggles, M.D., Alex. M. Burgess, M.D., F. V. Hussey, M.D.

Councillor for two years, Arthur Hollingworth, M.D.

It was moved and seconded that the by-laws be suspended and the Secretary empowered to cast one ballot for their election. It was so voted.

Dr. Cutts took the chair. He spoke a few words of appreciation and asked for the co-operation of the members. He then appointed the following committees: Collation, Frank H. Mathews, M.D., Edward S. Cameron, M.D. Publicity, Fred V. Hussey, M.D., Raymond G. Bugbee, M.D., Lucius C. Kingman, M.D.

A letter from Mrs. L. F. C. Garvin was read, acknowledging the resolutions on Dr. Garvin's death. The Standing Committee having approved the following application for membership, Dr. Harold Inman Gosline, the Secretary was instructed to cast one ballot for his election.

It having been moved and seconded that the dues for the coming year be \$5.00, the matter was

discussed by Drs. Brown, Kelley, Jones, Mowry, Mathews and Chase, and it was so voted.

On motion of Dr. George S. Mathews, \$175 was voted for the support of the reading room for the ensuing year.

Dr. Mathews moved that \$100 be appropriated for binding medical journals; Dr. Leonard moved an amendment, making this \$300, and the latter sum was appropriated. On motion of Dr. Kelley, it was voted to appropriate \$50 a meeting for the use of the medical building during the coming year. Dr. Sanborn reported two cases of cerebrospinal lues and presented one of these with unusual sensory disturbances. Dr. Kelley suggested that the X-ray illuminator be put in shape and it was voted that he be made a committee of one, with power to arrange this. The meeting adjourned at 10:25 P. M. Attendance, 41 members. Collation was served.

PETER PINEO CHASE, *Secretary*

PROVIDENCE MEDICAL ASSOCIATION.  
(Providence District Society)

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, March 5, 1923, at 8:45 o'clock.

Program: Pasteur: The world's greatest benefactor, Dr. Ernest Laplace, Philadelphia, Pa.

The Standing Committee has approved the following applications: Dr. Francis Herbert Coone, Dr. Myer Arthur Persky, Dr. Clarence L. Scamman.

Collation followed.

DR. PETER PINEO CHASE, *Secretary*

RHODE ISLAND MEDICO-LEGAL SOCIETY.

The Rhode Island Medico-Legal Society held its regular quarterly meeting at the Medical Library on Thursday, January 25, 1923, at 5:00 P. M. Twenty-two members and eight guests were present. Reports on the deaths of Dr. George Eston Simpson and Dr. Edward P. Stimpson were read and ordered spread upon the records. The President, following a few introductory remarks as to his promptings for the subject under discussion for the last two meetings, introduced Dr. Edmund B. Delabarre, professor of psychology at Brown University, who gave a very profound and intensely illuminating talk on "Persisting Psycho-

logical Effects of the War." There was a very active discussion entered into by many members of the Society. Following the adjournment of the meeting a light supper was served.

JACOB S. KELLEY, M.D., *Secretary*

PAWTUCKET MEDICAL ASSOCIATION.

Report of the January meeting of the Pawtucket Medical Association, January 18th, 1923:

There being no business of importance, the members present listened to an instructive talk on employers' liability insurance from the viewpoint of the insurance company.

This talk was given by Mr. Dodge of the Liberty Mutual Insurance Company. He explained the employer's liability and why, in some instances, due to what is called third party interference or causation, the insurance company for the employer is not liable. The employee, however, must seek damage from the third party by a civil suit, or may sue the employer for allowing fooling or negligence on the part of others, even though the injured employee be at his work at the time of accident.

Mr. Dodge explained that the employers' liability insurance varied in each State and that what might have occurred in one State is no precedent for another State, and, further, that while the insurance company's verdict might seem severe, yet these judgments are really hidebound by law, and of the law the physician is often only half informed.

Numerous questions on liability cases, contract work, insurance hospitals and other matters pertaining to the medical profession versus the insurance companies were put to Mr. Dodge and were frankly answered.

GEORGE E. RONNE, M.D., *Secretary*

DECEMBER MEETING OF THE PAWTUCKET MEDICAL ASSOCIATION.

"Resolved, That the Pulmotor be discarded and that the prone-pressure (Schaefer) method of artificial respiration be substituted; that the Schaefer or manual method of resuscitation of apparently drowned, gassed or electrically shocked persons be taught generally to the public of all ages and walks of life; that the Schaefer method is, in the opinion of the Pawtucket Medical Association, the only known method of resuscitation which is re-



liable, efficient and always at hand; that the method can be applied immediately, giving the person treated the best hope for life, without injury to the air cells of the lungs or other injury due to poorly or improperly adjusted apparatus, even when said apparatus is available."

The above resolution, moved by Dr. Chas. H. Holt, Secretary Pawtucket Board of Health, and seconded by Dr. Byron U. Richards, Secretary R. I. State Board of Health, was passed by the Pawtucket Medical Association at its December meeting without a dissenting vote. It merits the attention of the general public, most of whom at present have popularly considered the pulmotor the one sure way to save life from gas, water or electricity. It is a fact established by many present day investigators, notably the scientists connected with the U. S. Gas Association and the National Electric Light Association, that the pulmotor has never saved a life. Aside from the fact that it is seldom available at the place of accident, it requires certain mechanical knowledge to adjust and operate which is frequently not at hand. As an extract from the U. S. Army Medical Department Review for February, 1919, states: "—even more important is the fact, demonstrated now by universal experience, that when the apparatus is known to be available and sent for, *the manual method is neglected*. Thus, today, the apparatus in public use is, on the whole, contributory very materially to decrease the saving of life."

The Association was addressed by Dr. E. Preston Jones of Boston, Associate Director of First Aid of the New England Division of the American Red Cross. He carefully outlined the work on first aid, placed emphasis on what might properly be done before the doctor arrived, showed how the layman is instructed in keeping already-infected wounds as clean as possible, in minimizing the discomfort of broken bones, as in fractures, demonstrated dressings and bandages advocated for use by the police, firemen, school children and the general public of this city, to whom he has been lecturing during the past six weeks. He stressed the importance of continuous publicity of the Schaefer method of artificial respiration, giving many instances in his personal experience of its efficiency and value, deplored the fact that the average individual knows so little about this method, when it might be used to such good purpose while other agencies were being sought. He

stated that valuable time seems almost always to be lost, which might be used with advantage on the unfortunate victim, while helpless bystanders wait for some mechanical means of resuscitation, which, being mechanical, might be out of order, not available, or, on its arrival, to find that life had passed away while others waited for this assistance.

It is not out of place, at this point, to briefly outline the Schaefer method of resuscitation to the extent that the victim is placed prone, on his stomach, clothing about the neck loosened or cut away, one arm extended upward, the forearm used as a pillow for the head, which should be turned toward the open window, if indoors, or toward the breeze, if out of doors; by reason of being prone, the patient gets every advantage of plenty of fresh air. The other arm is placed at the side. With the person in this position, the rescuer should straddle the victim, place one hand on each side of the back of the chest about over the kidney, thumb beside the other fingers so that it will not get tired too soon, the weight of the rescuer is gradually placed on the hands and wrists, increasing to a sudden little push just before the pressure is released. This should be done about 12 to 15 times to the minute. The air is allowed to come back into the lung by itself, as the muscles of the chest wall and the lungs tend to return to their own normal quiet position.

Mr. Rollin Buckminster, Superintendent of the Pawtucket Gas Company, presented before the Association both the pulmotor and a new apparatus known as the "Inhalator." In the demonstration of the mechanical action of these two he was ably assisted by Mr. E. I. Pratt, Foreman of the Central Falls plant. It is now the intention of the Pawtucket Gas Co. to discard the pulmotor in favor of the manual method of artificial respiration, in which all employees are being systematically instructed. The inhalator is of assistance in gas poisoning cases only, in that after the patient has started to breathe it allows oxygen under pressure to be given to hasten full recovery.

Drs. H. G. Partridge and Edw. S. Cameron of Providence were guests of the Association and spoke of the "valuelessness" of apparatus similar to the pulmotor in reviving or assisting to breathe infants who were apparently stillborn, believing that the manual methods of resuscitation to be the only one practicable, safe and efficient.

## HOSPITALS

### PROVIDENCE CITY HOSPITAL. News Notes.

The regular meeting of the Staff Association was held at the City Hospital on February 21, 1923. The statistical report of the number of patients and diseases treated by the Eye and Nose and Throat Departments was read and discussed.

At the present writing the hospital is crowded. The most common diseases are measles, diphtheria, scarlet fever and whooping cough, with an unusual number of measles patients. The most of the deaths are among children under five years suffering from pneumonia following measles.

Physicians are invited to attend talks held in the office of the Superintendent at 12 M. every Wednesday.

### ST. JOSEPH'S HOSPITAL. *Dr. Chapman.*

Dr. Angelo Archette and Dr. John R. Bernardo have finished their terms of service as house officers at St. Joseph's Hospital and will begin practice in this city.

A meeting of the Staff Association of St. Joseph's Hospital was held on Friday, March 9, Dr. D. Frank Gray presiding.

Cases were discussed as follows: By Dr. McEvoy, a case of brain tumor; by Dr. Coughlin, duodenal ulcer, volvulus of the ileum; Dr. A. McLaughlin, Cæsarian section for complete central placenta prævia; Dr. Monahan, diabetic coma; Dr. Reynolds, cholecystitis; Dr. Harris, traumatic cerebral hemorrhage, septic myocarditis, hydro-nephrosis, empyema.

### RHODE ISLAND HOSPITAL. *Dr. Pickles.*

The regular monthly meeting of the Internes' Association was held on February 19, 1923, and was attended by about 40 members of the staff and internes. Dr. Alex S. Burgess gave a very interesting talk on "The Treatment of Diabetics," stressing particularly the care of various types of patients affected by this disease. In the course of his discussion he brought out much information, as yet unpublished, concerning the use of "Insulin," the recently discovered extract of the islands of Langerhans. Following the talk, an in-

fant with congenital absence of the greater portion of the occiput and consequent hernia cerebri was shown. The child was 21 days old, and in spite of the fact that over half of the brain was outside of the cranium, seemed well and healthy and was gaining weight steadily.

Dr. Francis King, who has just completed his service at this hospital, is serving an internship at the Providence Lying-In Hospital, and Dr. Henry S. Joyce, after spending a month at the Boston Consumptives' Hospital, is also at the Lying-In Hospital. On April 1, 1923, Drs. Royal C. Hudson and Wilfred Pickles began a month's leave of absence, and on the same date Drs. Harold Caswell, Joseph P. Nourie and Harold Spaulding started on their regular interne's service under the new schedule.

Dr. John M. Peters, superintendent of the hospital, with a party including Dr. Frederick T. Rogers, has started on a visit to South America in the course of which he expects to go as far south as Buenos Aires. He will return to his work at the hospital on April 1, 1923.

A Sanborn metabolism apparatus has recently been installed and is expected to be of great value in the study of pathological conditions of the thyroid and other glands of internal secretion.

The regular monthly meeting of the Internes' Association was held in the Chapel on Monday evening, January 15, 1923. Preceding the meeting proper, interesting patients from the wards were presented briefly by the various services. These included a case of arsenic dermatitis following the administration of neoarsphenamine; a fusiform aneurysm; a patient with carcinoma of the breast metastasizing to the bones of the pelvis; and one showing three penetrating bullet wounds of the skull with resulting left-sided hemiplegia beginning to clear up, the bullets being still lodged within the cranium. Dr. Murray S. Danforth gave a very interesting talk on fractures of the lower extremity, illustrating the application of various forms of traction apparatus by means of numerous models. About forty staff men and internes attended the meeting.

On March 1, 1923, Dr. Cyril M. Lydon returned from an obstetrical appointment in New York, and Dr. L. Arthur Hanson returned from a special appointment at the Providence Lying-In Hospital.